Spravochnik mekhanika gornorudnykh predpriyatiy AID 379 - I

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PART TWO Section XI Materials 575-630

Chapters: 34. Terminology and conventional denotation of mechanical properties of metals. Testing of metals; 35. Mechanical properties of metals and the range of their application; 36. Pipes; 37. Nonferrous metals; 38. Packing and padding materials. Bibliography for Section XI.

Section XII Construction Elements of Machines 631-772

Chapters: 39. Basic information on the strength of materials; 40. Construction elements and joints of machines; 41. Tolerances and fittings; 42. Sliding bearings; 43. Rolling bearings. Bibliography for Section XII.

Section XIII Lubrication 773-826

Chapters: 44. The theory of lubrication and its practical application; 45. Lubricating instruments; 46. Regeneration of lubricants. Bibliography for Section XIII.

Section XIV Repair and Assembly of Equipment 827-860

Chapters: 47. Wear in machines. Maximum admissible wear; 48. Restoration of worn and damaged parts. Bibliography for Section XIV.

Section XV Casting and Machining 861-921

Chapters: 49. Cast-iron castings; 50. Steel castings; 51. Nonferrous metal castings; 52. Equipment of foundry

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shops; 53. Raw materials of foundry productions; 54. Technical conditions for casting reception; 55. Technical processing of steel and of steel and iron castings; 56. Acetylene-oxygen flame tempering of large elements of mining equipment under conditions of mining repair shops. Bibliography for Section XV.

Section XVI Electrical Arc and Gas Welding and Cutting, Soldering 922-988

Chapters: 57. Basic conditions of welding; 58. Electric arc and spot welding; 59. Gas welding; 60. Weld seaming with hard alloys; 61. Gas and electric arc cutting; 62. Electrodes and additional materials for arc and gas welding; 63. Soldering. Bibliography for Section XVI.

Section XVII Forging, Riveting, and Machining 989-1022

Chapters: 64. Forging and boiler work; 65. Machining. Bibliography for Section XVII.

Section XVIII General Information Data 1023-1059

Chapters: 66. Mathematics; 67. Mechanics.

Purpose: Handbook for mechanics in all branches of the mining industry.

Facilities: A number of mining industry enterprises are named in the text.

No. of Russian and Slavic References: A large number of books and periodical articles is listed at the end of each section.

Available: A.I.D., Library of Congress.

5/5

LIPOV, Pavel Petrovich; ZHUKOVSKIY, G.V., kandidat tekhnicheskikh nauk, redaktor; KEL'NIK, V.P., redaktor; KOVALENKO, N.I., tekhnicheskiy redaktor.

[Equipment of crushing and screening plants] Oborudovanie drobil'no-sortirovochnykh fabrik. Sverdlovsk, Gos.nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, Sverdlovskoe otd-nie, 1955. 260 p. (MLRA 9:1)
(Crushing machinery)

LIPOV, P.I., inzhener.

New standards for boring machinery. Gor. zhur. no.12:52 D '56.
(MLRA 10:1)

1. Uralgiproruda.
(Boring machinery--Standards)

LIPOV, Pavel Petrovich.; KOZ'MIN, F.K., red.; SMOLDYREV, A.Ye., red. izd-va.; BEKKER, O.G., tekhn. red.

[Jaw crushers] Shchekovye drobilki. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1958. 111 p. (MIRA 11:10)

(Crushing machinery)

AUTHOR: Lipov, P.P., Engineer 127-58-1-21/28

TITLE: Improvement of the Design of Hammer Crushers (Uluchsheniye konstruktsii molotkovykh drobilok)

PERIODICAL: Gornyy Zhurnal, 1958, Nr 1, p 72 (USSR)

ABSTRACT: Hammer crushers with built-in plate feeders are used for the crushing of tough and clayey materials. Some units in these crushers are defective. The author describes particular units which gave rise to troubles in the ore dressing combine of the Bakal'skoye rudopravleniye (Bakal' Mine Administration) and in the Bogoslovskiy alyuminiyevyy zavod (Bogoslovo Aluminum Plant). The article is complemented with a note of the Editorial Board in which the opinion is expressed that improvement in the design of crushing-grinding equipment is not progressing well enough, because their manufacture has not been assigned to definite plants. It is suggested that the Gosplan of the RSFSR carry out such an assignment.
The article contains 1 figure.

ASSOCIATION: Uralgiproruda
AVAILABLE: Library of Congress
Card 1/1 1. Mines-Equipment 2. Ores-Crushing machines

LIPOV, Pavel Petrovich. Prinimala uchastiye VESELKOVA, K.S., dotsent, kand.tekhn.nauk. ORLOV, M.P., red.; SIDOROV, V.N., inzh., red. izd-va; KARASEV, A.I., tekhn.red.

[Mining machine operators] Gornyi mekhanik. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1960. 266 p. (MIRA 13:5)
(Mining engineering) (Mining machinery)

LIPOV, Pavel Petrovich; TSITSIN, Mikhail Alekseyevich. Prinimala uchastiye VESELKOVA, K.S., kand.tekhn.nauk; ABRAMOV, V.I., otv.red.; GALANOVA, V.V., tekhn.red.; PROZOROVSKAYA, V.L., tekhn.red.

[Mining mechanic's handbook] Spravochnik mekhanika gorno-rudnykh predpriiatii. Izd.2., perer. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1961. 787 p. (MIRA 14:6)

(Mining machinery)

VESELKOVA, Klavdiya Semenovna; LIPOV, Pavel Petrovich; GUDALOV, V.P., otv. red.; GADZHINSKAYA, M.A., red. izd-va; PROZOROVSKAYA, V.L., tekhn. red.; MAKSIMOVA, V.V., tekhn. red.

[Continuous transportation in ore dressing plants] Nepreryvnyi transport na obogatitel'nykh fabrikakh. Moskva, Gosgortekhizdat, 1963. 153 p. (MIRA 16:7)
(Ore dressing) (Conveying machinery)

L 23520-66

ACC NR: AP6008726

Pump *1* is turned on according to a preset program or by pressing a button on the control panel and the solution is fed to the first distributor well *4*. When the solution in section *2* reaches a given level, float valve *5* stops the flow into this section. This raises the level in the first distributor well and the solution flows through a divider into the second distributor well. When the solution in the second tray reaches a given level, it flows into the third well, etc. As the solution fills each subsequent tray, it simultaneously overflows into the reservoir through drain unit *3*. The pump is switched off when the last tray is filled and the liquid fertilization cycle is completed. The solution may be drained off by a siphon system, float valves, etc. The new method combines the operations of distribution and level control. A description is given of the BGT-600 installation designed for carrying out this nutrient distribution method. The operation of the automatic control unit in this installation is discussed and a schematic diagram of the automatic control unit is given. Orig. art. has: 6 figures.

SUB CODE: 02,13/ SUBM DATE: 00/ ORIG REF: 000/ OTH REF: 000

Card 2/2

L 23520-66 EWT(1) SCTB DD

ACC NR: AP6008726 (A) SOURCE CODE: UR/0356/65/000/011/0012/0015

AUTHOR: Lipov, Yu. (Engineer); Keller, N. (Engineer)

ORG: none

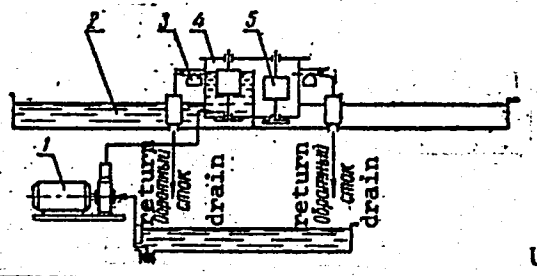
26
B

TITLE: Well method for distributing the solution in hydroponics

SOURCE: Tekhnika v sel'skom khozyaystve, no. 11, 1965, 12-15

TOPIC TAGS: hydroponics, agricultural machinery, plant growth

ABSTRACT: The authors describe a well method for feeding and distribution of the nutrient solution in hydroponic plant growing developed in 1962 by the All-Union Scientific Research Institute of Agricultural Machine Building. This method incorporates the sectional distribution system but eliminates the special central distributors and the additional level control system. A diagram of the well system is shown in the figure.



Card 1/2 UDC: 631.589.2

STYRIKOVICH, M.A.; LIPOV, Yu.M.; MARTYNOVA, O.I.; REZNIKOV, M.I.

Developing optimum phosphate conditions for superhigh-pressure boilers. Nauch. dokl. vys. shkoly; energ. no.2:185-198 '58.
(Boilers) (MIRA 11:11)

LIPOV, Yu. M.:

LIPOV, Yu. M.: "Experimental investigation of the protective effect of phosphates when operating at super-high pressure and with zero hydrate alkalinity." Min Higher Education Ussr. Moscow Order of Lenin Power Engineering Inst Imeni V. M. Molotov. Moscow, 1956. DISSERTATION FOR THE DEGREE OF CANDIDATE IN TECHNICAL SCIENCE.

So: Knizhnaya Letopis', No. 18, 1956

96-1-16/31

AUTHOR: Lipov, Yu.M., Candidate of Technical Sciences.

TITLE: An Investigation on the Protective Action of Phosphates at Super-high Pressure (Issledovaniye zashchitnogo deystviya fosfatov pri sverkhvysokom davlenii)

PERIODICAL: Teploenergetika, 1958, Vol.5, No.1, pp. 60 - 65 (USSR)

ABSTRACT: Existing standards for the amount of excess phosphate in boiler water aresufficient to prevent deposits but may be excessive, which is disadvantageous in very-high-pressure boilers.

This article examines the formation of deposits of $CaSO_4$ and $CaSiO_3$ in boiler water. Since the concentration of SO_4 ions is usually much greater than that of SiO_3, and there are indications that the solubilities of $CaSO_4$ and $CaSiO_3$ are similar at high pressure, the work was mainly concerned with preventing the formation of $CaSO_4$.

The experimental equipment, an open-circuit steam generator, is illustrated diagrammatically in Fig. 1. Samples of boiler water are taken in a region of intensive steam formation. The equipment can steam at 2.5 - 3 kg/hour at a pressure of

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An Investigation on the Protective Action of Phosphates at Super-high Pressure.

186 kg/cm^2. The tests were made under conditions of purely phosphate alkalinity. The water used was power station condensate containing measured amounts of $CaSO_4$ and Na_3PO_4. After the equipment had been working for about 2 1/2 hours on the prepared solution, samples of boiler water were taken. During this time, salts had accumulated in the water volume, which was of 1.6 kg in the working condition, and deposition of a solid phase had commenced. The concentrations of Ca and PO_4 ions in filtered and unfiltered samples are plotted in Fig.2. There was satisfactory agreement between the test results for the solubility of calcium phosphates and the results of Sauer and Zipfel obtained at 100 atm. (see Fig.3). It was decided to determine the solubility of phosphorous compounds of calcium and $CaSO_4$ in water at a pressure of 186 kg/cm^2. The experimental data are plotted in Fig. 2 and the majority of the experimental points lie in a comparatively narrow band between two straight lines a - a and b - b . The tests were made at pH values of 7.7 - 9. A line x - x given in Fig. 2 is constructed from mean calculated solubilities. The experimental points are in good agreement with a calculated line

An Investigation on the Protective Action of Phosphates at Super-high Pressure.

representing the ratio of the concentrations of Ca and PO_4 ions. Tests were carried out at pressures of 100, 140 and 185 atm. with pH values of 7 to 9. The results were compared with those of Sauer and Zipfel on the solubility of hydroxyl-apatite in water at pressures of 25 - 100 atm. and pH values of 7 and 9, with satisfactory agreement. Little information is available about the solubility of $CaSO_4$ at high temperatures and pressures, and so tests were carried out at 186 kg/cm^2 with the same procedure, using solutions of Na_3PO_4 and $CaSO_4$. The value of the product of the concentrations of Ca and SO_4 ions in the samples was constant and consequently a state of saturation had been reached. The concentration of SO_4 ions was determined by two methods, and for low concentrations radio-active tracers were used. The results of both groups of tests are given in Fig. 4 and agree well. For further calculations, the mean solubility from the two series of tests, equal to 1.93 mg/litre, was used. The results are lower than others that have been published.

Card3/5

An Investigation on the Protective Action of Phosphates at Super-high Pressure.

A curve of equilibrium concentrations of PO_4 and SO_4 ions in solution with equal concentrations of calcium is plotted in Fig. 5, and the corresponding equation given. If the concentration of phosphates is below the curve, sulphate deposits will form. Points lying on the curve correspond to the minimum concentration of phosphates that can prevent the formation of sulphate deposits.
Minimum and recommended concentrations of phosphates according to the content of SO_4 ions in boiler water are plotted in Fig.6, which also gives concentrations of PO_4 and SO_4 ions in the clean and salty sections of super-high-pressure power station boilers. These data, which were obtained in 1955, show that the water conditions at the evaporative heating surfaces of the boilers are those of large phosphate excess if only the content of sulphates in the boiler water is considered. Arising out of this it was decided, at power station No. 19 of the Moscow system, to limit the concentration of excess phosphates in the third-stage boiler-water to 80 - 100 mg/litre PO_4 ions, which is about half the value previously used.

96-1-16/31

An Investigation on the Protective Action of Phosphates at Super-high Pressure.

In boilers there is a danger of formation of deposits of $CaSiO_3$. A final decision about the necessary concentration of phosphates can only be made after the solubility of these compounds has been studied at high and super-high pressures. However, the authors think that the reduced concentrations that they recommend will be quite adequate.
There are 6 figures, 1 table and 6 references, 3 of which are Slavic.

ASSOCIATION: MEI

AVAILABLE: Library of Congress
Card 5/5

LEZIN, Vladimir Il'ich, inzh.; LIPOV, Yuriy Mikhaylovich, kand. tekhn. nauk, dots.; SELEZNEV, Mikhail Antonovich, kand. tekhn. nauk, dots.; SYROMYATNIKOV, Valentin Matveyevich, inzh.; SEROV, Ye.P., kand. tekhn. nauk, dots., red.; VOLOBUYEVA, I.V., red.

[Superheaters of boiler units] Paroperegrevateli kotel'nykh agregatov. Moskva, Energiia, 1965. 287 p. (MIRA 18:4)

LIPOV, Yu.N.; FATEYEV, M.N.

Regulator for a pneumatic blower-conveyor. Biul.tekh.-ekon.inform. Gos.nauch.-issl.inst.nauch.i tekh.inform. no.9:70-72 '63. (MIRA 16:10)

LI:OV, Yu.N.

Continuous universal loader. Biul. tekh.-ekon. inform. Gos. nauch.-issl. inst. nauch. i tekh. inform. 17 no.2:64-66 '64.
(MIRA 17:6)

LIPOV, Yu.N., [illegible]

Rotary feeder for a continuous action loader. Trakt. i sel'khozmash. no.4:40 Ap '65. (MIRA 18:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennogo mashinostroyeniya.

KOCHERYGINA, L.P., inzh.; LIPOV, Yu.N., insh.

The UZK-250 installation for growing green forage. Trakt. i sel'khozmash. no.5:34-35 My '65. (MIRA 18:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennogo mashinostroyeniya.

[illegible]IPOV, Yu.N.; SALIKHOV, N.M.

Use of water sprayers in greenhouses. Trakt. i sel'khozmash. no.12:25-26 D '65. (MIRA 18:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennogo mashinostroyeniya.

The zirconium-hafnium ratio in the granitoids of the Verkhisetsk diffusion. T. M. Lipova, I. D. Shevaleevskii, and A. M. Lupova (V. I. Vernadskii Inst. Geochem. and Anal. Chem. Acad. Sci. U.S.S.R., Moscow). *Geokhimiya* 1957, 134–40.—Forty-one spectral analyses for Zr and Hf are presented for granites of the Ural Mountains and of Kazakhstan and for zircons isolated from the same rocks. The abs. amt. of Zr varies from 1.2 × 10⁻² to 5.3 × 10⁻², and the ratio Zr:Hf = 38 to 40, a higher ratio than that of New England granites. In granitoids of the endocontact facies the amts. of Zr and Hf are highest; there is less in the central facies and much less in the rock of the gang. No relation could be found between the contents of Hf and U in these rocks. 17 references. Werner-Jacobson

Distr: 434j

MAKAROV, Ye. S.; LIPOVA, I.M.; DOLMANOVA, I.F.; MELIK'YAN, A.A.

Crystalline structure of uraninites and pitchblendes. Geokhimiia no.3:193-213 '60. (MIRA 14:5)

1. V. I. Vernadsky Insitute of Geochemistry and Analytical Chemistry, Academy of Sciences, U. S.S.R. Moscow.
(Uraninite)

LIPOVA, I.M.; SHEVALEVSKIY, I.D.

Zirconium hafnium ratio in zircons from pegmatites of various composition. Geokhimiia no.7:634-636 '61. (MIRA 14:6)

1. Institut geokhimii i analiticheskoy khimii imeni V.I.Vernadskogo, AN SSSR, Moskva.
(Zirconium) (Hafnium) (Pegmatites)

MAKAROV, Ye.S.; LIPOVA, I.M.

X-ray examination of thorianites, uranothorianites, and aldanites. Geokhimiia no.7:583-589 '62. (MIRA 15:7)

1. V.I. Vernadskiy Institute of Geochemistry and Analytical Chemistry Academy of Sciences, U.S.S.R., Moscow.
(Thorium oxides)
(X-ray crystallography)

LIPOVA, I.M.; KUZNETSOVA, G.A.; MAKAROV, Ye.S.

Study of the metamict conditions of zircons and cyrtolites. Geokhimiia no.6:681-694 Je '65. (MIRA 18:7)

1. Vernadsky Institute of Geochemistry and Analytical Chemistry, Academy of Sciences, U.S.S.R., Moscow.

17

CA LIPOVA, J.

Substances of meadow saffron and their derivatives. XIX. The isolation of principles of leaves and pericarp of meadow saffron, Colchicum autumnale L. F. Šantavý, J. Lipová, and E. Coufalík (Univ. Olomouc, Czech.). *Collection. farm.* 1, 230–44(1953); cf. *C.A.* 46, 9204c.— In the $CHCl_3$ ext. obtained from concd. EtOH ext. 3 substances were found by chromatography. They were substance F, m.p. 184–186°, colchicine, and substance E_1, m. 130–170° (cf. *C.A.* 44, 9618d; 46, 2182e, 4343e; 46, 1206d). Previously described substance E_1, isolated from the pericarp, was identical with E_1. Dagmar Hubíková

The alkaloid content of Datura suaveolens. Ruth Simões (Univ. São Paulo). *Anais faculdade farm. e odontol., Univ. São Paulo* 9, 185–8(1951).—Detns. of total alkaloids in leaves of *D. suaveolens* were made monthly for 24 months by the method of Albuquerque (cf. Pereira and Costa, *Anais faculdade farm. Porto* 8, (1948)). The hyoscyamine content varied from 0.00 to 0.16%. No relation of the variation to the season was found. F. Fromm

GAYDAMAK, S., student; SMIRNYAKOVA, G., studentka; KUZ'MINA, E., studentka; LIPOVA, R., studentka; FOMINA, T., studentka; PAVLOVA, N., studentka; KALINOVA, M., studentka; SHCHELKO, A., student; SHCHERBAKOVA, L., studentka; GUDOCHKINA, L.M.

Effect of salinity on the results of determining the specific weight of soils. Sbor. nauch. trud. Kaz GMI no.19:197-198 '60. (MIRA 15:3)

(Soils--Analysis)

RABINOVICH, Ye.Sh.; LIPOVA, V.A.

Effect of cyclophosphane and thio-TEPA on the ascitic form of a transplanted strain of an ovarian tumor in rats. Vop. onk. 11 no.6:68-74 '65. (MIRA 18:8)

1. Iz ginekologicheskogo otdeleniya (zav. - prof. V.P.Tobilevich, nauchnyy rukovoditel' - doktor med.nauk I.D.Nechayeva) i laboratorii eksperimental'noy morfologii (zav. - doktor med.nauk M.P.Ptokhov) Instituta onkologii AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR prof. A.I.Serebrov).

LIPOVAC, Kresimir

Spectrophotometric measurements on natural and irradiated kunzite. Slobodan Ristić and Stanislava Lipovac (Inst. Nuclear Sci. "Boris Kidrich," Belgrade, Yugoslavia). *Bull. Inst. Nuclear Sci. "Boris Kidrich"* (Belgrade) 9, 77–80(1959).—Two specimens of optically polished kunzite, one a lilac variety of Pala, Calif., and the other a rose variety from Minas Gerais, Brazil, were each irradiated with x-rays at dose rates of some hundreds of r./min. for varying intervals and their spectra in the range of 2000–10,000 A. were detd. A linear relation between the log of x-ray dose and area subtended by the resp. spectra was established. Some of the variability in the data was attributed to a time effect, change in the spectra occurred between the time of irradiation and the time of recording the spectra, and a temp. effect, resulting from keeping the irradiated specimen at various temps. for extended periods prior to photometric measurements. Lloyd Kahn

LIPOVAC, Stanislava

Spectrophotometric investigation of 3,4-benzpyrene in several organic solvents. Glas Hem dr 25/26 no.1/2:81-87 '61.

1. Faculty of Science, Institute of Physical Chemistry, Beograd.

(Spectrophotometer) (Benzene)

LIPOVAC, Stanislava N.; STEFANOVIC, M.

Coulometric method in determining molecular ratio of the inclusion compounds of deoxycholic acid. Glas prir mat SANU no.253:105-113 '63.

1. Institute for Chemistry and Physical Chemistry, Faculty of Sciences, University of Beograd.

LIPOVAN, G.

"Trajan Vula, precursor of aviation". p. 18, (AVIATIA SPORTIVA, Vol. 5, No. 3, Mar. 1954, Bucuresi, Rumania)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

LIPOVAN, C.

LIPOVAN, C. The Vuia airplane. p. 6

Vol. 2, no. 12, Dec. 1956
ARIPILE PATRIEI
TECHNOLOGY
Rumania

So: East European Accession, Vol. 6, No. 5, May 1957

SALAGEAN, Traian; SELMEREANU, Horia; LIPOVAN, Leonard; CSATARY, Gabriel

Electric soldering of nonferrous metals by pressure. Constr mas 16 no. 2:75-77 F '64.

L 41804-66 EWP(v)/T/EWP(t)/ETI/EWP(k) LJP(c) JD/HM/WB

ACC NR: AP6031547 SOURCE CODE: RU/0027/65/010/002/0347/0357

AUTHOR: Hrelescu, Mircea; Vas, Alexandru; Lipovan, Leonard; Bar, Friedrich

ORG: Timisoara Technical Research Center, Academy of the Socialist Republic of Rumania, Timisoara (Academia Republicii Socialiste Romania, Centrul de cercetari tehnice)

TITLE: Contributions to the study of the destruction by cavitation of some steels obtained by electric arc alloying

SOURCE: Studii si cercetari de metalurgie, v. 10, no. 2, 1965, 347-357

TOPIC TAGS: chromium steel, manganese steel, cavitation, welding technology

ABSTRACT: The authors studied the resistance to destruction by cavitation of metals deposited by welding and obtained through the alloying of soft steels in electric arcs with the aid of ceramic fluxes. As compared to a cast steel, the metals deposited by welding were found to have a better resistance to cavitation, especially in the case of Cr-Mn steels. The use of suitable ceramic fluxes was found to lead to deposited metals with good anti-cavitation properties.
Orig. art. has: 7 figures and 2 tables. [JPRS: 34,166]

SUB CODE: 11, 20 / SUBM DATE: none / ORIG REF: 002 / SOV REF: 010
OTH REF: 005

Card 1/1 af

0919 0232

LIPOVEC,F.

LIPOVEC,F. Decisions necessary for increasing productivity condition of machinery, and necessary decisions.

Vol. 4, No. 7, July 1955 TEKSTIL

SO: Monthly List of East European Accessions, (EEAL), LC. Vol. 5, No.3 March, 1956

LIPOVECZ, Ivan, Kossuth-dijas

Silicon esters and their application in founding. Koh lap 9 no. 3: Supplement Ontode 5 no. 3: 58-62 Mr '54.

LIPOVECZ, Ivan, Kossuth-dijas

Silicon esters and their application in founding. Pt. 2.
Koh lap 9 no. 4: Supplement: Ontode 5 no. 4: 84-88 Ap '54.

K-/6

COUNTRY :Yugoslavia
CATEGORY :

ABS. JOUR. : RZKhim., No. 16 1959, No. 58950

AUTHOR :Lipovec, J.
INST. :not given
TITLE :Experiments with the Freezing of Fruits

ORIG. PUB. :Tehnika, 13, No 11, (1958); Prehran Ind. 12, No 11, 1oc-171 (1958)

ABSTRACT :The fruits were placed in glass or paper (impregnated with microcrystalline wax) containers and covered with 35% sugar syrup or mixed with powdered sugar (2 : 1 and 4 : 1) and stored at -10°. Best results were obtained with syrup-covered fruits in glass containers. The use of powdered sugar gave good results but led to an intensification of the oxidative processes in unpitted fruits. The fruits were well preserved at -11° over a period of 4-6 months. Fruits packaged in paper

CARD: 1/2

253

B-10

COUNTRY : Yugoslavia
CATEGORY :

ABS. JOUR. : RZKhim., No. 16 1959, No. 58850

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : containers were subjected to more intensive oxidative processes. Prunes were found to be better preserved when frozen unpealed; apricots gave better results when the skins were removed. From author's summary

CARD: 2/2

LIPOVEC, Janko, strucni saradnik (Maribor, Maistrova 12)

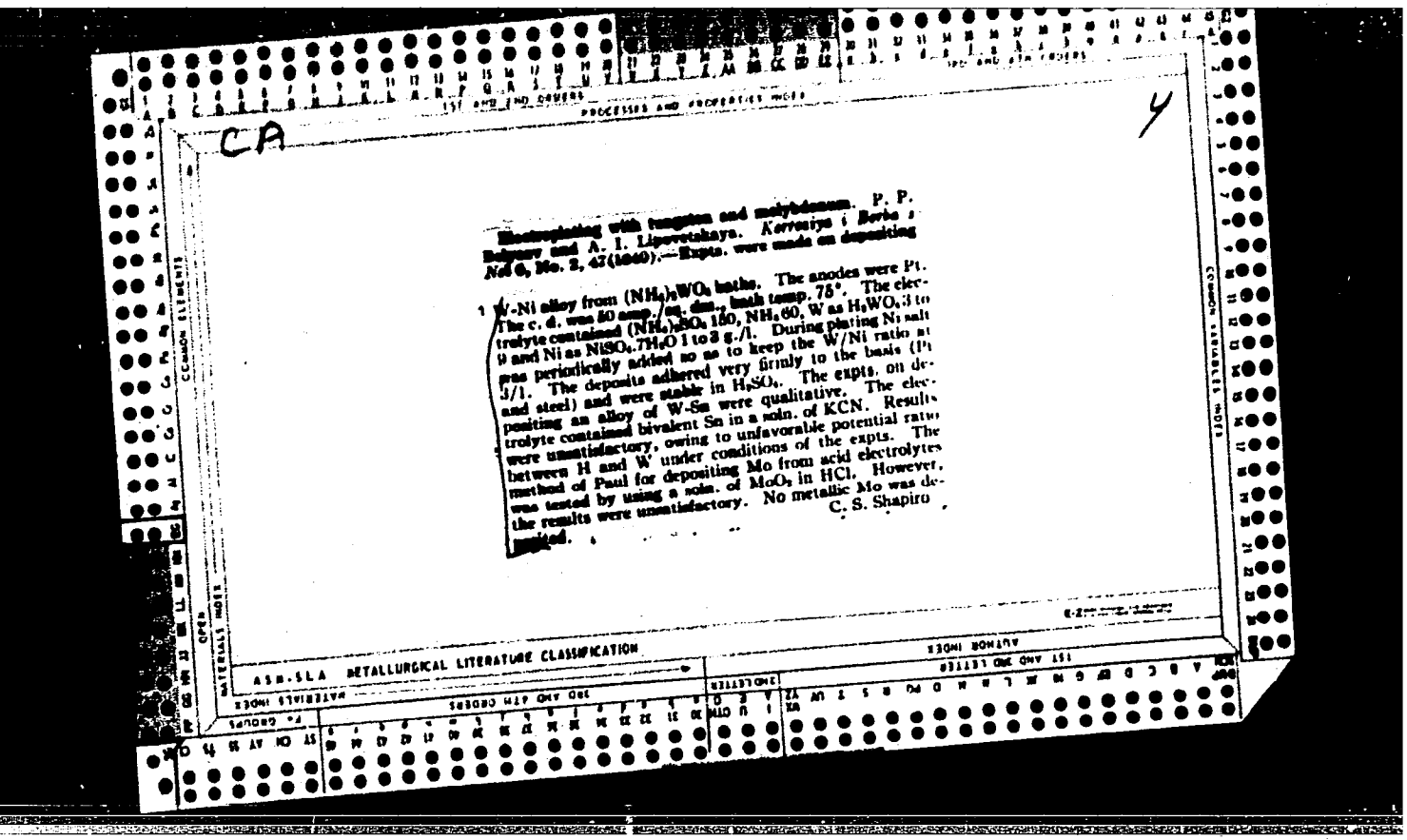
Concerning the production of ready frozen dishes. Tehnika Jug 16 no.11: 2047-2048 '61.

1. People['s] Republic [of] Slovenia['s] Agricultural Institute, Maribor.

GREGUSS, Pal, ifj. Dr., okl.vegyesz; LIPOVECZ, Ivan, Kossuth-dijas

Influencing of oil combustion by acoustic energy. Ipari energia 2 no.5:97-100 My '61.

1. Vasuti Tudomanyos Kutato Intezet (for Greguss).
2. Budapesti Muszaki Egyetem (for Lipovecz).



Electroplating with tungsten and molybdenum. P. P. Bulgarev and A. I. Lipovetskaya. *Korroziya i Borba s Nei* 6, No. 2, 47(1940).—Expts. were made on depositing

1 W-Ni alloy from $(NH_4)_2WO_4$ baths. The anodes were Pt. The c. d. was 50 amp./sq. dm., bath temp. 75°. The electrolyte contained $(NH_4)_2SO_4$ 150, NH_4OH 60, W as H_2WO_4 3 to 9 and Ni as $NiSO_4.7H_2O$ 1 to 3 g./l. During plating Ni salt was periodically added so as to keep the W/Ni ratio at 3/1. The deposits adhered very firmly to the basis (Pt and steel) and were stable in H_2SO_4. The expts. on depositing an alloy of W-Sn were qualitative. The electrolyte contained bivalent Sn in a soln. of KCN. Results were unsatisfactory, owing to unfavorable potential ratios between H and W under conditions of the expts. The method of Paul for depositing Mo from acid electrolytes was tested by using a soln. of MoO_3 in HCl. However, the results were unsatisfactory. No metallic Mo was deposited.

C. S. Shapiro

CA

Acceleration of the cathodic deposition in zinc electrolyte solutions. N. T. Kudryavtsev, A. I. Lipovetskaya, and K. N. Kharlamova. *Vestnik Inzhenerov, Tekh.* 1947, 187-90; *Chem. Zentr.* (Russian Zone Ed.) 1949, I, 230; cf. *C. A.* 43, 6521*e*. A study was made of the influence of admixts. and of stirring of Zn electrolytes on the value of the max. permissible cathodic c.d. and the throwing power of the bath. None of the following admixts. had any appreciable effect on the cathodic process: KCNS, NaCN, H_3O_3, $K_2S_2O_8$, $KMnO_4$, gelatin, glue, glycerol, starch, rosin, Na_2SO_4, or $CdSO_4$. Stirring increased the max. permissible c.d. 2-3-fold, so that the deposition of Zn was accelerated. This effect was independent of the gas used for stirring (O, H). This max. c.d. was also increased with increase in the rate of stirring. When other electrolyte conditions remained const. the decrease in throwing power caused by stirring was not appreciable. Changing the c.d. and the temp. of the stirred bath had no appreciable effect on the throwing power.

M. G. Moore

M

64

•Electrogalvanising in Zincate Electrolytes at Increased Current Densities. N. T. Kudryavtsev, A. I. Ignoyetskaya, and K. N. Kharlamova (*Zhur. Prikład. Khim.*, 1940, **13**, (4), 577–584).—[In Russian]. The authors studied the influence of agitation and additions to the bath on the upper limiting cathodic c.d., $(D_k)_{lim.}$, and on the throwing power (P) in the electrodeposition of zinc from zincate baths, using Armco-iron cathodes. Addition of up to 5 g./l. tin to baths of compositions: zinc 0·234–0·295N, KOH 1·6–2·05N, K_2CO_3 0·2–0·5N, gave dense bright deposits at 20° C., $(D_k)_{lim.}$ increasing from 0·2 to 0·7 amp. as the tin concentration increased from 0·5 to 5·0 g./l., but at 50° C. addition of tin had no appreciable influence on $(D_k)_{lim.}$. Dense but less satisfactory deposits could be obtained in the absence of tin by addition of NaCN, KCNS, or gelatin. Addition of Rochelle salt, H_2O_2, $K_2N_2O_2$, $KMnO_4$, glue, glycerol, starch, rosin, Na_2SO_3, $CdSO_4$, &c., had no beneficial influence; indeed, glue, rosin, and the oxidising agents adversely affected the quality of the deposits. Various gases (air, O_2, H_2) were bubbled under the cathode into a bath containing zinc 0·13N, free KOH 1·59N, K_2CO_3 0·32N, tin 0·25 g./l., during electrolysis at 50° C.; $(D_k)_{lim.}$ was increased 2–3 times independently of the nature of the gas. Further experiments were made using baths with and without tin, and with zinc 0·05–0·45N, temp. 20°–80° C., and 0·5–2 l. air/min. on 1 dm.² cathode. $(D_k)_{lim.}$ increased with increasing agitation rate, concentration of zinc, and bath temp. Dense deposits were obtained from agitated tin-free baths, but they were less bright than those from baths containing tin. The throwing power, P, was determined by the method of Kudryavtsev and Nikiforova (*ibid.*, p. 367; preceding abstract); it was somewhat reduced by agitation of the bath, but was little affected by changes in c.d. or temp. Suitable conditions for air-agitated zincate baths for various types of work are recommended.—G. V. E. T.

Aug. 1957 Lab Galvanochem Metal Plating Sec, NIIKh IMSH

LipovetskAYA, A.I.

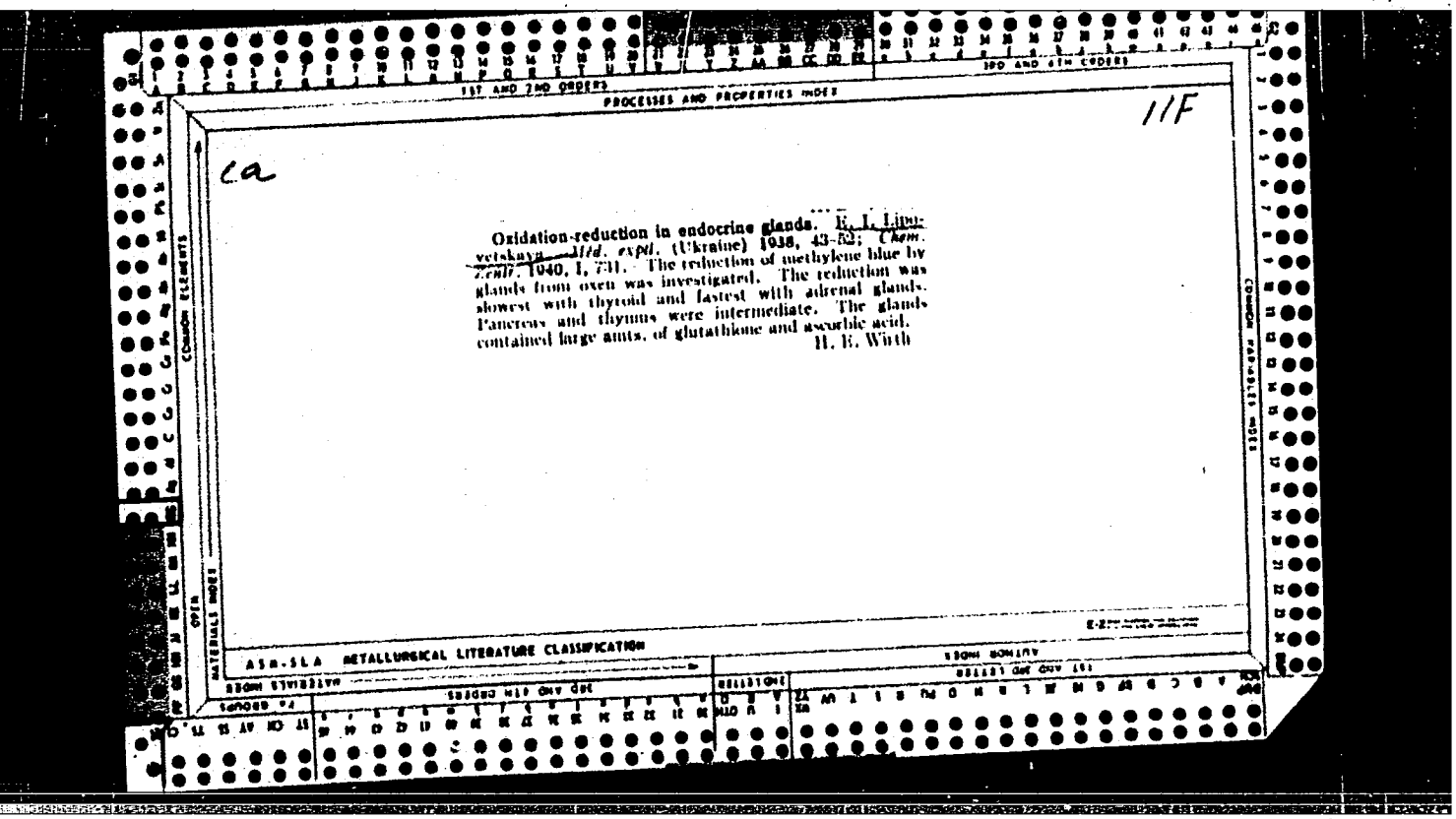
Anode process in zincate electrolytes. V. T. Kudryavtsev, A. I. Lipovetskaya, and K. N. Kharlamova (*Appl. Chem. U.S.S.R.* 25, 459-62(1952)(Engl. translation); *Zhur. Prikład. Khim.* 25, 419-22(1952).—The anode polarization, the anode c.d., and the constancy of the electrolyte in alk. Zn solns. were investigated. Small amts. of Pb (up to 0.6%) and Sn (up to 0.9%) did not markedly affect either the anode polarization, the magnitude of the limiting current, or the current efficiency. The anodic c.d., at which the anodic current efficiency was approx. equal to the cathodic current efficiency (97–99%), was within the limits of 1.5–2.0 amp./sq. dm. At and above 3.0 amp./sq. dm., owing to a passivation of the anode surface, the anodic current efficiency was sharply reduced. By use of anodes alloyed with Sn, or Pb plus Sn, the required small concn. of Sn in soln., to insure compact cathodic deposition, could be maintained. Neither addn. of glycerol, Rochelle salt, starch, gelatin, or other similar org. substances nor the super-position of a.c. on d.c. exerted any marked effect on the behavior of the Zn anodes.

George E. Jones, Jr.

LIPOVETSKAYA, A.I., mladshiy nauchnyy sotrudnik

Corrosion-prevention measures for pipes of an aluminum motor-vehicle radiator. Trudy NIIKHIMMASH no.27:99-101 '59. (MIRA 14:8)

(Aluminum) (Corrosion and anti-corrosives)

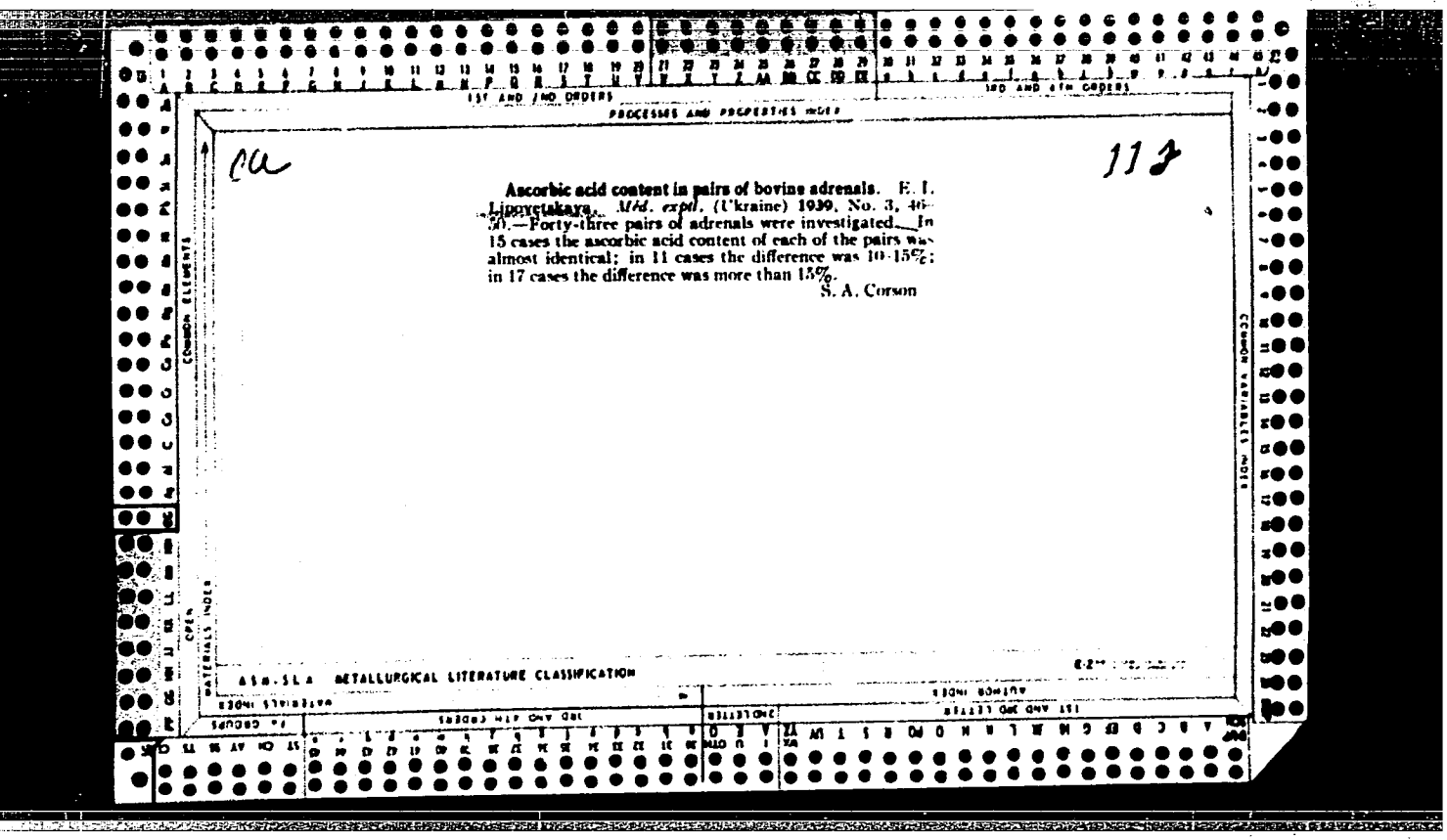


11F

1a

Oxidation-reduction in endocrine glands. E. I. Lipovetskaya. *Med. exptl.* (Ukraine) 1938, 43-52; *Chem. Zentr.* 1940, I, 711. The reduction of methylene blue by glands from oxen was investigated. The reduction was slowest with thyroid and fastest with adrenal glands. Pancreas and thymus were intermediate. The glands contained large amts. of glutathione and ascorbic acid.
H. E. Wirth

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



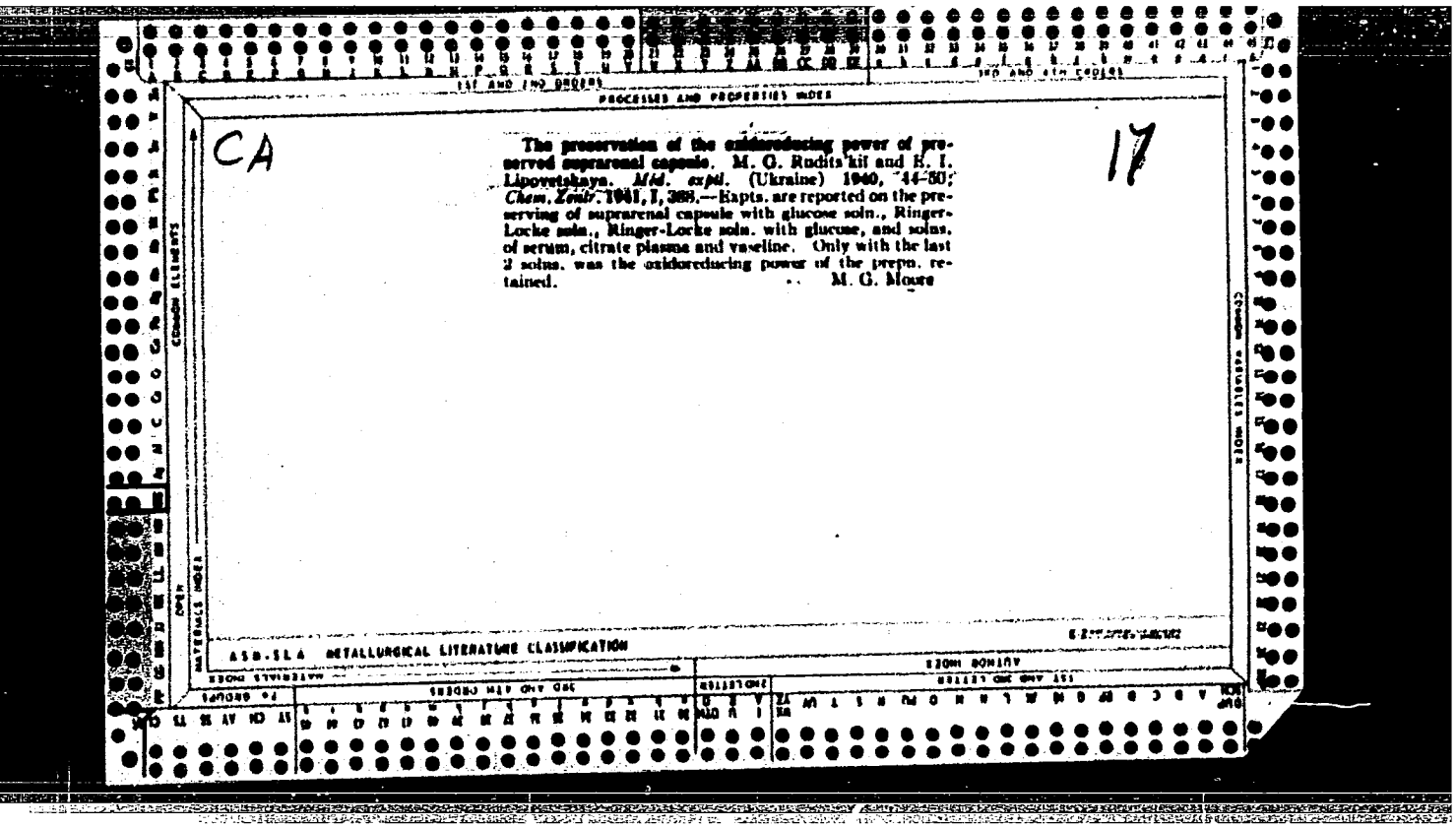
Ca

113

Ascorbic acid content in pairs of bovine adrenals. E. I. Lipovetskaya. *Med. expl.* (Ukraine) 1939, No. 3, 46–50.—Forty-three pairs of adrenals were investigated. In 15 cases the ascorbic acid content of each of the pairs was almost identical; in 11 cases the difference was 10–15%; in 17 cases the difference was more than 15%.

S. A. Corson

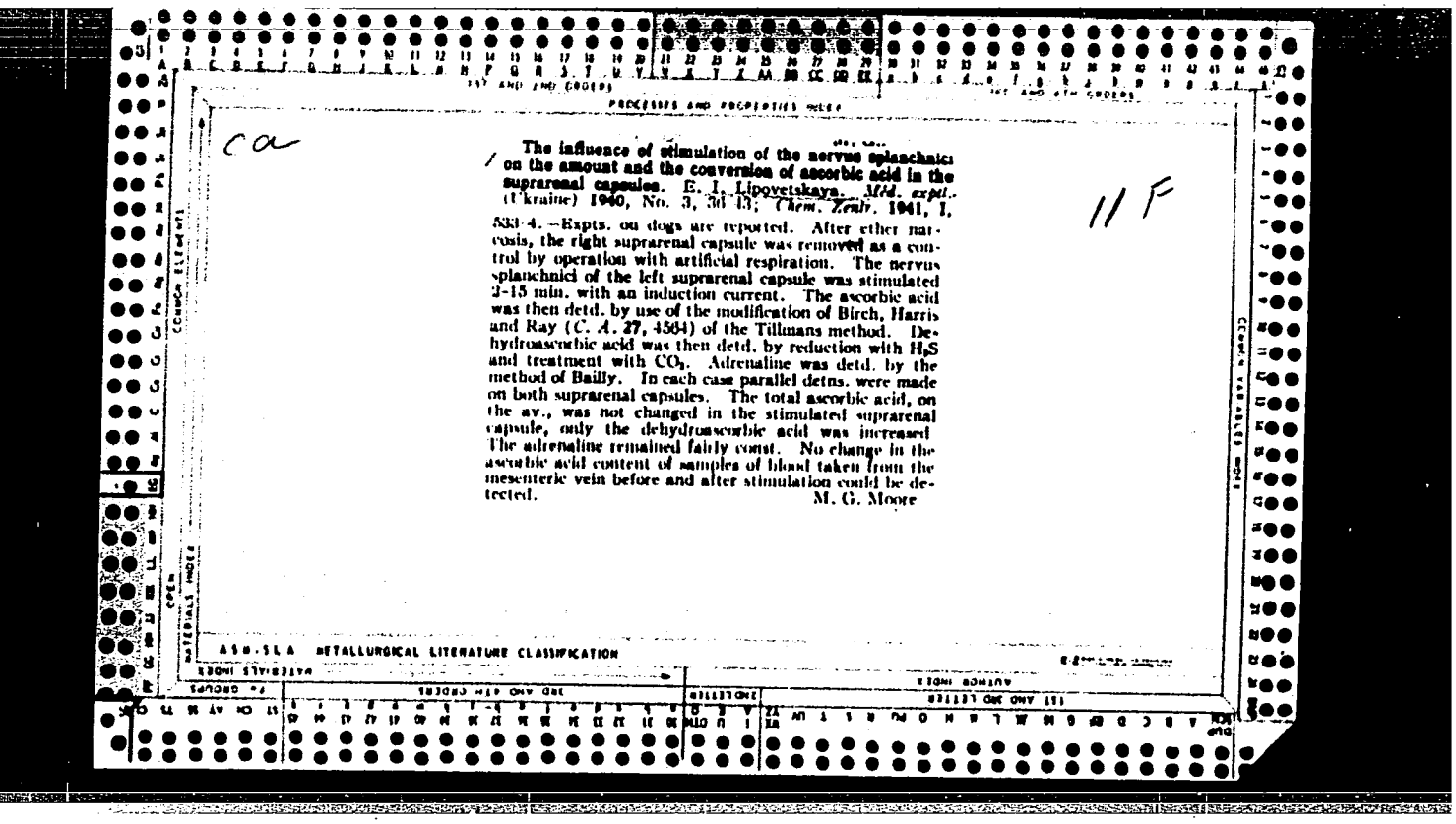
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA

17

The preservation of the oxidoreducing power of preserved suprarenal capsule. M. G. Rudits'kii and E. I. Lipovetskaya. *Mikrobiol. zhurn.* (Ukraine) 1940, 7, 44-50; *Chem. Zentr.* 1941, I, 388.—Expts. are reported on the preserving of suprarenal capsule with glucose soln., Ringer-Locke soln., Ringer-Locke soln. with glucose, and solns. of serum, citrate plasma and vaseline. Only with the last 2 solns. was the oxidoreducing power of the prepn. retained. M. G. Mouse



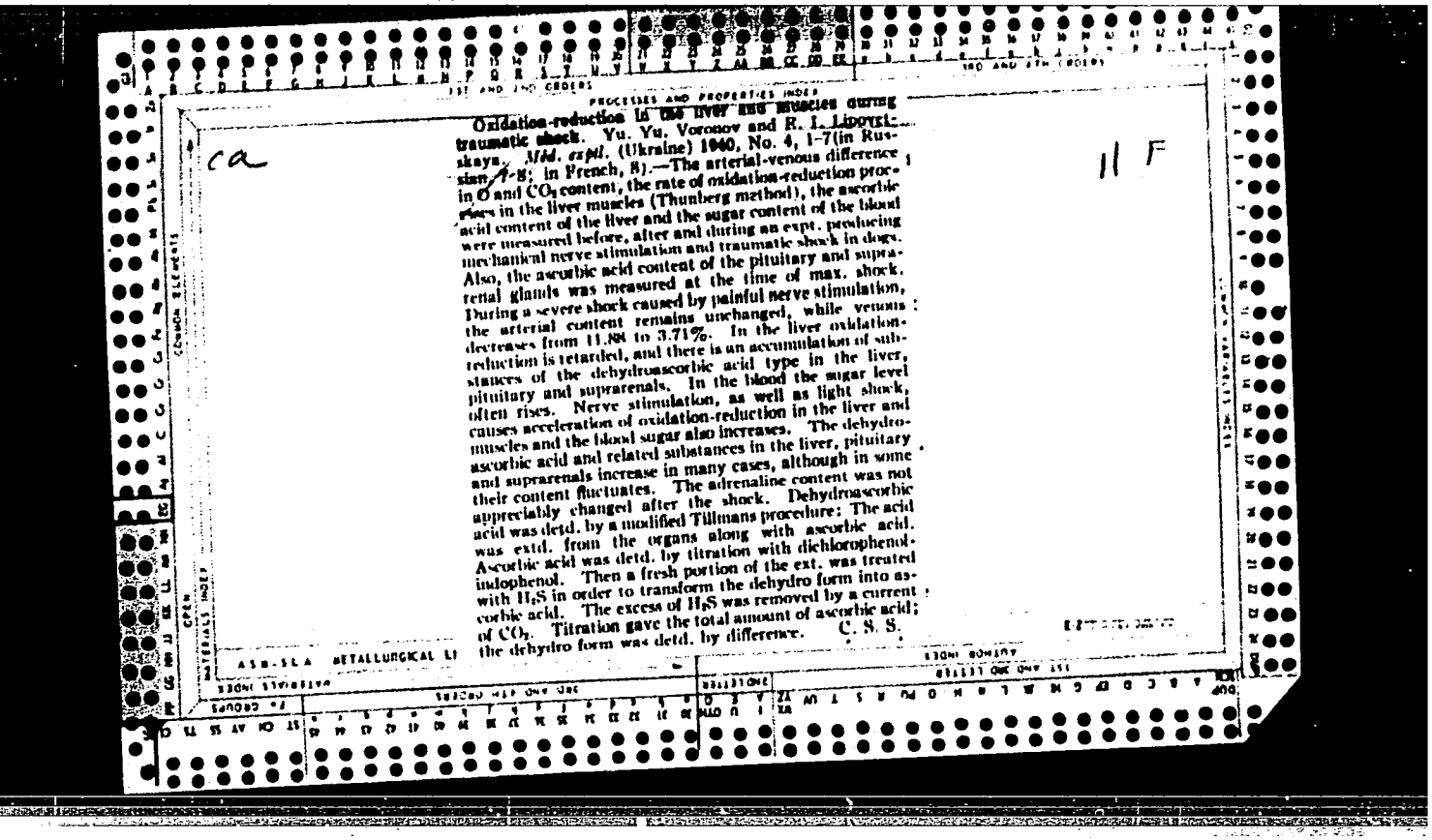
ca

The influence of stimulation of the nervus splanchnicus on the amount and the conversion of ascorbic acid in the suprarenal capsules. E. I. Lipovetskaya. *Mitt. exptl.* (Ukraine) 1940, No. 3, 50-13; *Chem. Zentr.* 1941, I, 533-4.—Expts. on dogs are reported. After ether narcosis, the right suprarenal capsule was removed as a control by operation with artificial respiration. The nervus splanchnici of the left suprarenal capsule was stimulated 3-15 min. with an induction current. The ascorbic acid was then detd. by use of the modification of Birch, Harris and Ray (*C. A.* 27, 4584) of the Tillmans method. Dehydroascorbic acid was then detd. by reduction with H_2S and treatment with CO_2. Adrenaline was detd. by the method of Bailly. In each case parallel detns. were made on both suprarenal capsules. The total ascorbic acid, on the av., was not changed in the stimulated suprarenal capsule, only the dehydroascorbic acid was increased. The adrenaline remained fairly const. No change in the ascorbic acid content of samples of blood taken from the mesenteric vein before and after stimulation could be detected.

M. G. Moore

11 F

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Oxidation-reduction in the liver and muscles during traumatic shock. Yu. Yu. Voronov and R. I. Livovskaya. *Med. expl.* (Ukraine) 1940, No. 4, 1-7(in Russian); 7-8; in French, 8).—The arterial-venous difference in O and CO_2 content, the rate of oxidation-reduction processes in the liver muscles (Thunberg method), the ascorbic acid content of the liver and the sugar content of the blood were measured before, after and during an expt. producing mechanical nerve stimulation and traumatic shock in dogs. Also, the ascorbic acid content of the pituitary and suprarenal glands was measured at the time of max. shock. During a severe shock caused by painful nerve stimulation, the arterial content remains unchanged, while venous decreases from 11.88 to 3.71%. In the liver oxidation-reduction is retarded, and there is an accumulation of substances of the dehydroascorbic acid type in the liver, pituitary and suprarenals. In the blood the sugar level often rises. Nerve stimulation, as well as light shock, causes acceleration of oxidation-reduction in the liver and muscles and the blood sugar also increases. The dehydroascorbic acid and related substances in the liver, pituitary and suprarenals increase in many cases, although in some their content fluctuates. The adrenaline content was not appreciably changed after the shock. Dehydroascorbic acid was detd. by a modified Tillmans procedure: The acid was extd. from the organs along with ascorbic acid. Ascorbic acid was detd. by titration with dichlorophenol-indophenol. Then a fresh portion of the ext. was treated with H_2S in order to transform the dehydro form into ascorbic acid. The excess of H_2S was removed by a current of CO_2. Titration gave the total amount of ascorbic acid; the dehydro form was detd. by difference. C. S. S.

LIPOVETSKAYA, E.I.

Effect of anesthesia on the amount of ascorbic acid and adrenaline in the adrenal glands, brain, and liver of animals capable and incapable of vitamin C synthesis [with summary in English]. Ukr. biokhim.zhur. 29 no.2:131-144 '57. (MLRA 10:7)

1. Kafedra biokhimii Khar'kovskogo meditsinskogo instituta
(ANESTHESIA) (ASCORBIC ACID) (ADRENALINE)

LIPOVETSKAYA, E.I.

Data on the effect of aminazine on some aspects of the metabolism of ascorbic acid and adrenaline in animals capable and incapable of synthesizing vitamin C. Vop. pit. 21 no.2:81-84 Mr-Ap '62. (MIRA 15:3)

1. Iz kafedry biokhimii (zav. - chlen-korrespondent AN USSR prof. A.M. Utevskiy) Khar'kovskogo meditsinskogo instituta.
(CHLORPROMAZINE) (ASCORBIC ACID) (ADRENALINE)

RUDNYY, N.M., kand.tekhn.nauk; BOGOMOLOV, G.Ya.; KOLOMIYETS, A.R.; KLIMENKO, A.P.; LIPOVETSKAYA, G.I.; RAZINKOV, A.I.

Acoustic pickup of the presence of a flow of fluid viscous and powdery materials. Avtom.i prib. no.3:55-58 Jl-S '62. (MIRA 16:2)

1. Institut avtomatiki Gosplana UkrSSR.
(Flowmeters)

LIPOVETSKAYA, N.G.

Three cases of Down's disease in twins. Pediatriia 38 no.1: 82-86 '60. (MIRA 13:10)
(TWINS) (MONGOLISM)

LIPOVETZKAYA, N.G.

Three cases of Down's disease in twins. Pediatria 38 no.4: 82-86 Apr.'60. (MIRA 16:7)

1. Iz otdeleniya isucheniya razvitiya mozga i spikhonervnoy kliniki (zav.-chlen-korrespondent AMN SSSR prof. B.N.Klosovskiy) Instituta pediatrii AMN SSSR (dir.-chlen-korrespondent AMN SSSR prof. O.D.Sokolova-Ponomareva).
(MENTALLY HANDICAPPED)

USSR/Cultivated Plants - Fodders. M-4

Abs Jour : Ref Zhur - Biol., No 7, 1958, 29832

Author : Salyukov, P.A., Yelizar'yeva, V.V., Lipovetskaya, N.N.

Inst : The Scientific Research Institute for Fodder and Pasturage.

Title : The Comparative Productivity of Annual Fodder Crops Raised on Bottomland and Estuary Meadows.

Orig Pub : Tr. N. -i. in-ta kormov i pastbishch, 1957, 1, 101-109

Abstract : According to tests made by the Institute in 1952-1955 the best annual fodder crops on bottomland and estuary meadows are corn, sunflower, sudan grass and Hungarian grass. When planted on an overturned layer, these crops showed higher yields than when planted directly on the bed. The corn yields on bottomland and estuary meadows (300-482 centners per ha. of green stuff) were 4-7 times

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Abs Jour : Ref Zhur - Biol., No 7, 1958, 29832

higher than on the open steppe. The root system reaches the ground water level. On meadows with solonchak and weakly alkaline soils corn yields to the sunflower in productivity.

22101 Lipovetskaya, R.I. Lecheniye distrofii u detey aminostimulinom. Trudhot, delo, 1949, No. 7, stb 613-16.

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

LIPOVETSKAYA, T.F., inzh.

Experimental investigation of the distribution of stresses along the bottom of rigid stamping dies resting on a sandy foundation. Izv.VNIIG 49:54-64 '53. (MIRA 12:5)
(Soil mechanics)

LIPOVETSKAYA, T. F.

"Experimental Investigation of Stress Distribution Along the Bottoms of Solid Foundations Resting on Sand." Cand Tech Sci, All-Union Sci Res Inst of Hydraulic Engineering imeni B. Ye. Vedeneyev, Leningrad, 1954. (KL, No 8, Feb 55)

SO: Sum. No. 631, 26 Aug 55-Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

SOV/124-57-5-5983

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 5, p 140 (USSR)

AUTHOR: Lipovetskaya, T. F.

TITLE: An Experimental Investigation of the Stress Distribution Over the Undersurfaces of Rigid Penetration Dies Emplaced Upon a Sandy Base (Eksperimental'nyye issledovaniya raspredeleniya napryazheniy po podoshve shestkikh shtampov, raspolozhennykh na peschanom osnovanii)

PERIODICAL: Sb. tr. Mosk. inzh.-stroit. in-t, 1956, Nr 14, pp 216-220

ABSTRACT: Results are given of experiments undertaken to determine the distribution pattern of the pressures acting upon the facial undersurface of a rigid penetration die emplaced upon a sandy base under assumed conditions approximating those of the two-dimensional problem. The experiments were conducted with a medium-grain-size dry sand (having a density γ of 1.65 t/m^3) which was spread out in layer form over the inside bottom surfaces of two troughs, one relatively large, the other relatively small. The trough dimensions were: (large) length 6.5 m, width 5.5 m, height or depth 3 m; (small) length 3 m, width 2.75 m, height or depth 2 m. In each trough three

An Experimental Investigation of the Stress Distribution (cont.)

square-faced dies were emplaced in a row atop the layer of sand; of the dies in the large trough the die-face side length b was 1.42 m; of the dies in the smaller trough this same dimension (b) was 0.7 m. The stresses in the sand layers were measured by Bombchinskiy-type and resistance-transducer-type pressure capsules placed under the middle die in each trough, at a depth of 4-5 cm below the sand-layer surface in the large trough, 2-3 cm below in the smaller trough. In each trough the die pressure was gradually increased to the point where the sand layer failed; in the small trough this occurred at 4 kg/cm^2, in the large trough at 2.5 kg/cm^2. In each trough the stress-distribution pattern proved to be parabolic; in both troughs the ratio of the maximum pressure (beneath the die-face center) to the mean pressure σ beneath the whole die-face area was found to increase with increasing $\sigma/b\gamma$ ratio -- and in both cases according to the same law. It emerges that the stress-distribution curves plotted by the author experimentally for pressure loads almost sufficient to cause the sand layers to fail differ but little from the analogous curves plotted theoretically by the reviewer (Inzhenernyy sb., 1952, Vol 12) in his first-approximation solution to the mixed problem of the elasticity and limiting state of a medium of loose material. The author deems that the results obtained by her demonstrate the unsuitability of attempting to analyze a structure resting upon a sandy base by treating it as a semi-infinite elastic medium; it is her belief that a better approximation

of her experimental findings will be yielded either by the solution to the mixed problem or by simulation of the sand layer with a medium whose deformation behavior is nonlinear.

M. I. Gorbunov-Posadov

YEVDOKIMOV, P.D., kandidat tekhnicheskikh nauk; LIPOVETSKAYA, T.F., kandidat tekhnicheskikh nauk.

Determining resistance to displacement in bound soils in foundations of structures. Gidr.stroi. 25 no.11:43-49 D '56. (MLRA 10:1)
(Foundations) (Soil mechanics)

14(6)
AUTHOR: Lipovetskaya, T.F., Engineer

SOV/98-59-4-8/17

TITLE: Measuring the Pore Pressure in the Core of the Mingechaur Dam (Izmereniye porovogo davleniya v yadre Mingechaurskoy plotiny)

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1959, Nr 4, pp 33-36 (USSR)

ABSTRACT: The author describes the measurement of interstitial pressure within the core of the 80-m high Mingechaur dam. As the dam's core is composed of silted materials ranging from clayey sand to pure clay, a suspicion arose that the core might for some time remain in a diluted state and thus cause dam sag. In order to find out how strong the new dam was, the Otdeleniye gruntov i osnovaniy VNIIG imeni B.Ye. Vedeneyeva (Section for Grounds and Fundaments of the VNIIG imeni B.Ye. Vedeneyev) and the Bakinskoye otdeleniye Gidroenergoproyekta (Baku Section of the Gidroenergoproyekt) jointly carried out a measurement of interstitial pressure during 1955-1956. For

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this purpose, 5 wells were drilled into the dam's core, into which 31 piezometers were installed at depths from 18.9 to 59.6 m from the dam's base. The piezometers were of PTN-1, PTN-2, and PTN-3 types with a string-type ground dynamometer of the DGS-118-type as a measuring element. All of the three above mentioned piezometers were developed by Engineer K.S. Pekhov. As for the DSG-118-type dynamometer, its prototype was developed by Engineer V.P. Bombchinskiy of the Gidroproyekt. The measurement revealed that the dam was beyond the danger of sagging, as its core's settling period was over, with interstitial pressure coefficients varying between 0.0 and 0.23 (the ideal coefficient being 0.0). The slight variations in coefficient readings were due to the heterogeneousness of the dam's building materials. There are 3 diagrams, 1 table and 1 Soviet reference.

LIPOVETSKAYA, Ye.M., mladshiy nauchnyy sotrudnik

Effect of phenamine on intraocular pressure and the width of the pupil when administered in different ways. Uch. zap. UKIGB 4:299-303 '58. (MIRA 12:6)

1. Ukrainskiy eksperimental'nyy institut glaznykh bolezney i tkanevoy terapii imeni akademika V.P. Filatova.
(PHENETHYLAMINE) (INTRAOCULAR PRESSURE)
(PUPIL(EYE))

LIPOVETSKAYA, Ye.M., mladshiy nauchnyy sotrudnik.

Effect of different doses of phenamine on intraocular pressure.
Oft.zhur. 13 no.2:73-76 '58. (MIRA 11:4)

1. Iz Ukrainskogo na uchno-issledovatel'skogo eksperimental'nogo instituta glaznykh bolezney i tkanevoy terapii im. akad. V.P. Filatova (direktor-prof. N.A.Puchkovskaya).
(PHENETHYLAMINE) (EYE)

LIPOVETSKAYA, Ye. M., Candidate of Med Sci (diss) -- "The effect of phenamine on intraocular pressure (Experimental investigation)". Odessa, 1959. 11 pp (Odessa State Med Inst im N. I. Pirogov), 200 copies (KL, No 21, 1959, 120)

LIPOVETSKAYA, Ye.M.

Experimental analysis of the mechanism of phenamine test. Uch. zap. UEIGE 5:109-112 '62 (MIRA 16:11)

SHEVALEV, A.Ye.; LIPOVETSKAYA, Ye.M.

Experimental hypertension in the eye following artificial disturbance of the sexual glands function. Oft. zhur. 17 no.1:53-56 '62. (MIRA 15:3)

1. Iz Ukrainskogo nauchno-issledovatel'skogo eksperimental'nogo instituta glaznykh bolezney i tkanevoy terapii imeni akademika V.P. Filatova (dir. - prof. N.A. Puchkovskaya).
(HORMONES, SEX)
(INTRAOCULAR PRESSURE)

LIPOVETSKAYA, Ye.Ya., inzh.

Practices of the steel-casting shop of the Koliushchenko Road Machinery Plant. Stroi.i dor.mashinostr. 4 no.12:30-31 D '59. (MIRA 13:3)

(Steel castings)

LIPOVETSKII, B.M.

Lipid mobilising factor of the hypophysis and some questions concerning the regulation of lipid metabolism. Kor Vasa 6 n.o.3: 231-239 '64.

1. Department of Clinical and Experimental Cardiology, Pavlov Institute of Physiology, Leningrad.

LIPOVETSKIY, A.Ya.; LEYRIKH, V.E.; DANYUSHEVSKIY, V.S.; DANILINA, Z.N.

Testing the corrosion resistance of plugging cements in Bashkir oil field waters. Izv. vys.ucheb. zav.; neft' i gaz.3 no.11:107-112 '60. (MIRA 14:1)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti imeni akademika I.M.Gubkina.
(Bashkiria--Oil well cementing)
(Corrosion and anticorrosives)

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S/152/61/000/001/005/007
B023/B064

15.3000 (1142)
12.3000

AUTHORS: Lipovetskiy, A. Ya., Leyrikh, V. E., Danyushevskiy, V. S., Danilina, Z. N.

TITLE: Effect of certain admixtures upon the corrosion stability of plugging cements in the waters occurring below the petroleum layer of Bashkiriya

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Neft' i gaz, no. 1, 1961, 95-98

TEXT: In the previous paper (Ref. 1) the authors found that the corrosion stability to such aggressive media as the waters occurring below the petroleum layer of Bashkiriya is essentially increased by increasing the impermeability of solid cement. Admixtures of calcium- and sodium chlorides and of furyl alcohol were introduced for this purpose into the cement solution. The admixture of 12-15 g $CaCl_2$ and 5 g NaCl per 100 g of water leads to the formation of a cement with dense structure and a permeability which is a hundred times lower than that of ordinary cement. The hydrochloric acid used in the investigations was, with respect to its composi-

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tion, very similar to the effluents of the Sterlitamakskiy sodovo-tsementnyy kombinat (Sterlitamak Soda-cement kombinat). Thus, it is possible to use these effluents or their concentrate for mixing the cement. The other admixture, furyl alcohol, is introduced together with hydrochloric acid aniline. It is assumed that this admixture leads to a closing of the pores and capillaries of the cement, this entailing a considerable reduction of permeability. By admixing a 10% aqueous furyl alcohol solution with 10% (referred to furyl alcohol) hydrochloric acid aniline, permeability is reduced by 50%. The admixture of furyl alcohol increases the cracking stability of the cement. Nevertheless, a diffusion of aggressive components from the medium into the cement is possible in spite of the protective measures described. The authors therefore investigated the effect of admixtures upon the corrosion stability of the cement independent of the increase of its impermeability. The chemical properties of the admixtures indicated the presence of such an effect. The microscopic examinations, which Professor V. V. Lapin made on the specimens prepared by the authors, showed that the cement to which furyl alcohol has been admixed contains no portlandite ($Ca(OH)_2$). The authors assume that calcium hydroxide is bound by furyl alcohol, which increases the cor-

Effect of certain admixtures... S/152/61/000/001/005/007
B023/B064

rosion stability. The corrosion stability was investigated on porous samples by the method of V. V. Kind (Ref. 3). Cements of the Sterlitamak plant and the "Komsomolets" plant (at Vol'sk) were studied, i.e., in Devonian and Arti-waters occurring below the petroleum layer as well as in synthetic solutions which contained the chief components of such waters. A previous paper mentioned the chemical characteristics of the cements studied and the composition of the aggressive media. The following results were obtained in the studies described here: The introduction of certain amounts of calcium- and sodium chlorides into the cement solution yields, after hardening, a cement that is completely stable to all media investigated. When the cement was stored in Arti- and Devonian natural waters, the stability coefficient of the sample with this admixture remained between 0.94 and 1.09, while in samples without admixture it was only 0.46-0.61. The addition of furyl alcohol considerably increases the stability of cement. Thus, the stability coefficients of Sterlitamak samples, after having been stored for one year in the mentioned natural waters, were by 20-30% higher than in samples without an admixture of furyl alcohol. In the authors' opinion, the chief effect of the admixture is, however, the fact that, as a result of an admixture, a high imper-

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meability occurs in cement, which is lacking in porous samples. There are 2 tables and 3 Soviet-bloc references.

ASSOCIATION: Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im. akad. I. M. Gubkina (Moscow Institute of the Petrochemical and Gas Industry imeni Academician I. M. Gubkin)

SUBMITTED: May 21, 1960

22230
S/093/61/000/002/001/003
A051/A129

15.3200

AUTHORS: Lipovetskiy, A. Ya.; Leyrikh, V. E., and Danyushevskiy, V. S.

TITLE: Some properties of cement mortar with additions of furyl alcohol

PERIODICAL: Neftyanoye Khozyaystvo, no. 2, 1961, 15-19

TEXT: Studies were carried out at the Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti (Moscow Institute of the Petrochemical and Gas Industries im. I. M. Gubkin) which showed that furyl alcohol ($C_4H_3O \cdot CH_2OH$) with aniline chloride forms resins becoming infusible and insoluble with time. Furyl alcohol is a furane derivative and is produced on an industrial scale by the hydration of furfurole. The cost of 1 ton of furyl alcohol produced at the Ferganskiy gidroliznyy zavod (Fergana Hydrolysis Plant) is about 500 rubles (for 1961). Cement prepared with a 10% aqueous solution of furyl alcohol, to which aniline chloride in an amount of 15 weight % of the alcohol has been added, exhibits improved properties, in particular an increased resistance to aggressive solutions, such as oil-field waters. This cement also has increased impermeability and resistance to crack formation and exhibits higher swelling properties. The effect of the furyl alcohol addition to the cement on its permeability was

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evaluated by the permeability coefficient, which was determined according to S. L. Zaks' method (Ref. 2) using the ЛП-1 (LP-1) instrument. Table 1 shows the different values of the permeability coefficients. The crack-formation resistance was determined by a comparative test of two plates using a bullet shot (Fig. 1). The ГОСТ 1581-42 (GOST 1581-42) method was used to determine the effect of the furyl alcohol addition on the mobility, swelling and setting time. The setting process of the cement was found to slow down in the presence of furyl alcohol; the first part of the setting time increases, however, and the interval between the beginning and the end of the setting changes less. But the setting time can be controlled by small additions of $CaCl_2$. The effect of furyl alcohol on the strength of the cement was studied through the kinetics of the strength increase during the setting process of the samples and the effect of temperature on the setting intensity (Fig. 2, 3). The linear deformations of 4x4x16 cm prisms were measured with an ИЗБ-1 (IZV-1) instrument in order to determine the effect of furyl alcohol on the volumetric deformation (Fig. 4). Finally, microscopic investigations were conducted to determine the nature of the effect on the properties of the cement, showing that the latter had a dense structure and a high development of gel-formation. The cement contains almost no portlandite ($Ca(OH)_2$). The use of the cement with additions of furyl alcohol

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is recommended in the construction of oil wells, subjected to the action of aggressive oil-field waters. There are 3 graphs, 1 photograph, 3 tables and 2 Soviet references.

Table 1:

Temperature	Composition of cement mortar	Setting time of the mortar, days				
		0.5	1	2	3	7
18 ± 2°	without additions	-	3.55	0.102	0.033	0.023
	with addition of furyl alcohol	-	0.129	0.002	0	0
15 ± 2°	without additions	0.050	0.026	-	-	-
	with addition of furyl alcohol	0.0006	0	-	-	-

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LIPOVETSKIY, A.Ya.; LEYRIKH, V.E.; DANYUSHEVSKIY, V.S.

Study of some properties of cement groutings for cementing slim wells. Trudy MINKHiGP no.35:127-152 '61. (MIRA 14:11)
(Oil well cementing)

LIPOVETSKIY, A.Ya.; LEYRIKH, V.E.; DANYUSHEVSKIY, V.S.; DANILINA, Z.N.

Effect of some additives on the corrosion resistance of plugging cements in formation waters of Bashkiria. Izv. vys. ucheb. zav.; neft' i gaz 4 no.1:95-98 '61. (MIRA 15:5)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti imeni akademika Gubkina.
(Bashkiria--Oil well cementing)
(Corrosion and anticorrosives)

LIPOVETSKIY, A.Ya.; LEYRIKH, V.E.; DANYUSHEVSKIY, V.S.

Some properties of cement grouting with a furfuryl alcohol additive. Neft. khoz. 39 no.2:15-19 F '61. (MIRA 17:2)

LIPOVETSKIY, A.Ya.; DANYUSHEVSKIY, V.S.; VEDISHCHEV, I.A.

Study of the effect of flowing salt solutions on the permeability of cement stone. Izv. vys. ucheb. zav.; neft' i gaz 5 no.1:23-28 '62. (MIRA 16:11)

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[Cement slurries in well drilling] TSementnye rastvory v burenii skvazhin. Leningrad, Gostoptekhizdat, 1963. 198 p. (MIRA 17:3)

LIPOVETSKIY, A.Ya.; DANYUSHEVSKIY, V.S.; CHZHAO PIN-KHUAN [Chao P'ing-huang]

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(Cement—Permeability)

LIPOVETSKIY, A.Ya.; DANYUSHEVSKIY, V.S.; VEDISHCHEV, I.A.

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(Oil well drilling fluids)

LIPOVETSKIY, A.Ya.; DANYUSHEVSKIY, V.S.

Investigating the effect of the reservoir waters of the fields of the eastern regions on hardened cement. Trudy MINKHiGP 46:64-75 '64. (MIRA 17:6)

LIPOVETSKIY, A.Ya.; DANYUSHEVSKIY, V.S.; CHZHAO PIN-KHUAN [Chao P'ing-huang]

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